

IN THE CLAIMS

Kindly replace the prior claims listing by the following listing:

1-30. (cancelled)

31. (currently amended): A metal complex compound of formula (1a)



wherein Me is manganese, titanium, iron, cobalt, nickel or copper,

X is a coordinating or bridging radical,

n and m are each independently of the other an integer having a value of from 1 to 8,

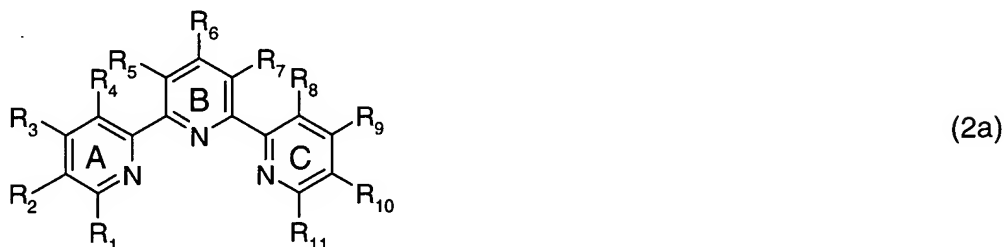
p is an integer having a value from 0 to 32,

z is the charge of the metal complex,

Y is a counter-ion,

q = z/(charge Y), and

L is a ligand of formula (2a)



wherein

R₆ is unsubstituted or substituted C₁-C₁₈alkyl or aryl; cyano; halogen; nitro; -COOR₁₂ or -SO₃R₁₂ ~~wherein R₁₂ is in each case hydrogen, a cation or unsubstituted or substituted C₄-C₁₈alkyl or aryl; -SR₁₃, -SO₂R₁₃ or -OR₁₃ wherein R₁₃ is in each case hydrogen or unsubstituted or substituted C₄-C₁₈alkyl or aryl; -NR₁₄R₁₅; -(C₁-C₆alkylene)-NR₁₄R₁₅; -N[⊕]R₁₄R₁₅R₁₆; -(C₁-C₆alkylene)-N[⊕]R₁₄R₁₅R₁₆; -N(R₁₃)-(C₁-C₆alkylene)-NR₁₄R₁₅; -N[(C₁-C₆alkylene)-NR₁₄R₁₅]₂; -N(R₁₃)-(C₁-C₆alkylene)-N[⊕]R₁₄R₁₅R₁₆; -N[(C₁-C₆alkylene)-N[⊕]R₁₄R₁₅R₁₆]₂; -N(R₁₃)-N-R₁₄R₁₅ or -N(R₁₃)-N[⊕]R₁₄R₁₅R₁₆, wherein R₁₂ is in each case hydrogen, a cation or unsubstituted or substituted C₁-C₁₈alkyl or aryl;~~

R₁₃ is in each case hydrogen or unsubstituted or substituted C₁-C₁₈alkyl or aryl;

~~R₁₃ is as defined above~~ and R₁₄, R₁₅ and R₁₆ are each independently of the other(s)

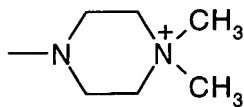
hydrogen or unsubstituted or substituted C₁-C₁₈alkyl or aryl, or R₁₄ and R₁₅ together with

the nitrogen atom bonding them form an unsubstituted or substituted 5-, 6- or

7-membered ring which may optionally contain further heteroatoms; and R₁, R₂, R₃, R₄, R₅, R₇, R₈, R₉, R₁₀ and R₁₁ are each independently of the others as defined

above for R₆ or are hydrogen or unsubstituted or substituted aryl,

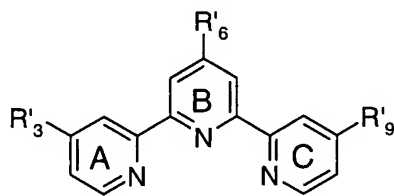
- with the proviso that
- (i) at least one of the substituents R₁-R₁₁ contains a quaternized nitrogen atom which is not directly bonded to one of the three pyridine rings A, B or C and that
 - (ii) Y is neither I⁻ nor Cl⁻ in the case that Me is Mn, R₁-R₅ and R₇-R₁₁ are hydrogen and R₆ is



32. (original): A metal complex compound according to claim 31, wherein Me is manganese which is present in oxidation state II, III, IV or V.

33. (original): A metal complex compound according to claim 31, wherein Me is iron which is present in oxidation state II, III or IV.

34. (currently amended): A metal complex compound according to claim 32, wherein the ligand L is a compound of formula (3)



(3),

wherein

~~R₆ is cyano; halogen; nitro; -COOR₁₂ or -SO₃R₁₂ wherein R₁₂ is in each case hydrogen, a cation, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted by C₁-C₄alkyl, C₁-C₄alkoxy, halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino, N-mono- or N,N-di-C₁-C₄alkyl-amino unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino,~~

~~N-naphthylamino, where the amino groups may be quaternized, phenyl, phenoxy or by naphthoxy; -SR₁₃, -SO₂R₁₃ or -OR₁₃ wherein R₁₃ is in each case hydrogen, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above; -NR₁₄R₁₅; -N[⊕]R₁₄R₁₅R₁₆; -N(R₁₃)-(CH₂)₁₋₆NR₁₄R₁₅; -N(R₁₃)-(CH₂)₁₋₆-N[⊕]R₁₄R₁₅R₁₆;~~

~~-N(R₁₃)-N-R₁₄R₁₅ or -N(R₁₃)-N[⊕]R₁₄R₁₅R₁₆, wherein~~

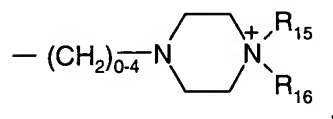
R₁₂ is in each case hydrogen, a cation, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted by C₁-C₄alkyl, C₁-C₄alkoxy, halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino,

N-mono- or N,N-di-C₁-C₄alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino, N-naphthylamino, where the amino groups may be quaternized, phenyl, phenoxy or by naphthoxy;

R₁₃ is in each case hydrogen, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above;

~~R₁₃ is as defined above and R₁₄, R₁₅ and R₁₆ are each independently of the other(s) hydrogen, unsubstituted or hydroxyl-substituted C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above, or R₁₄ and R₁₅ together with the nitrogen atom bonding them form a pyrrolidine, piperidine, morpholine or azepane ring which is unsubstituted or substituted by at least one unsubstituted C₁-C₄alkyl and/or substituted C₁-C₄alkyl, wherein the nitrogen atom can be quaternized;~~

or a radical



wherein R₁₅ and R₁₆ are as defined above and the ring may be substituted; and

R'₃ and R'₉ are as defined above or are hydrogen, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above.

35-42. (cancelled).

43. (previously presented): A washing, cleaning, disinfecting or bleaching agent, comprising

- I) 0 - 50 % A) of an anionic surfactant and/or B) of a non-ionic surfactant,
- II) 0 - 70 % C) of a builder substance,
- III) 1 - 99 % D) of a peroxide, and

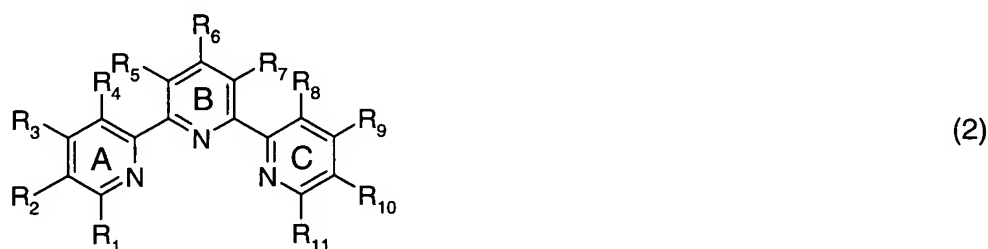
IV) E) a metal complex compound of formula (1) as described in claim 46 in an amount which, in the liquor, gives a concentration of 0.5 – 50 mg/litre of liquor when from 0.5 to 20 g/litre of the washing, cleaning, disinfecting and bleaching agent are added to the liquor,
the percentages in each case being percentages by weight, based on the total weight of the agent.

44-45 (cancelled).

46. (currently amended): A method of catalyzing an oxidation reaction which comprises oxidizing a substrate in the presence of a catalytically effective amount of a metal complex compound of formula (1)



wherein Me is manganese, titanium, iron, cobalt, nickel or copper,
X is a coordinating or bridging radical,
n and m are each independently of the other an integer having a value of from 1 to 8,
p is an integer having a value of from 0 to 32,
z is the charge of the metal complex,
Y is a counter-ion,
q = z/(charge Y), and
L is a ligand of formula (2)



wherein

R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀ and R₁₁ are each independently of the others hydrogen; unsubstituted or substituted C₁-C₁₈alkyl or aryl; cyano; halogen; nitro; -COOR₁₂ or -SO₃R₁₂ ~~wherein R₁₂ is in each case hydrogen, a cation or unsubstituted or substituted~~

~~C₁-C₁₈alkyl or aryl; -SR₁₃, -SO₂R₁₃ or -OR₁₃ wherein R₁₃ is in each case hydrogen or unsubstituted or substituted C₁-C₁₈alkyl or aryl; -NR₁₄R₁₅; -(C₁-C₆alkylene)-NR₁₄R₁₅; -N[⊕]R₁₄R₁₅R₁₆; -(C₁-C₆alkylene)-N[⊕]R₁₄R₁₅R₁₆; -N(R₁₃)-(C₁-C₆alkylene)-NR₁₄R₁₅; -N[(C₁-C₆alkylene)-NR₁₄R₁₅]₂; -N(R₁₃)-(C₁-C₆alkylene)-N[⊕]R₁₄R₁₅R₁₆, -N[(C₁-C₆alkylene)-N[⊕]R₁₄R₁₅R₁₆]₂; -N(R₁₃)-N-R₁₄R₁₅ or -N(R₁₃)-N[⊕]R₁₄R₁₅R₁₆, wherein~~

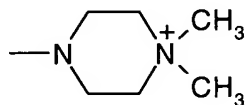
R₁₂ is in each case hydrogen, a cation or unsubstituted or substituted C₁-C₁₈alkyl or aryl;
~~R₁₃ is as defined above~~

R₁₃ is in each case hydrogen or unsubstituted or substituted C₁-C₁₈alkyl or aryl;

and R₁₄, R₁₅ and R₁₆ are each independently of the other(s) hydrogen or unsubstituted or substituted C₁-C₁₈alkyl or aryl, or R₁₄ and R₁₅ together with the nitrogen atom bonding them form an unsubstituted or substituted 5-, 6- or 7-membered ring which may optionally contain further heteroatoms;

with the proviso that

- (i) at least one of the substituents R₁-R₁₁ contains a quaternized nitrogen atom which is not directly bonded to one of the three pyridine rings A, B or C and that
- (ii) Y is neither I⁻ nor Cl⁻ in the case that Me is Mn(II), R₁-R₅ and R₇-R₁₁ are hydrogen and R₆ is



47. (previously presented): A method according to claim 46, wherein Me is manganese which is present in oxidation state II, III, IV or V.

48. (previously presented): A method according to claim 46, wherein Me is iron which is present in oxidation state II, III or IV.

49. (previously presented): A method according to claim 46, wherein X is CH₃CN, H₂O, F⁻, Cl⁻, Br⁻, HOO⁻, O₂²⁻, O²⁻, R₁₇COO⁻, R₁₇O⁻, LMeO⁻ or LMeOO⁻ wherein R₁₇ is hydrogen, -SO₃C₁-C₄alkyl, or unsubstituted or substituted C₁-C₁₈alkyl or aryl, and L and Me are as defined in claim 46.

50. (previously presented): A method according to claim 46, wherein Y is $R_{17}COO^-$, ClO_4^- , BF_4^- , PF_6^- , $R_{17}SO_3^-$, $R_{17}SO_4^-$, SO_4^{2-} , NO_3^- , F^- , Cl^- , Br^- , I^- , citrate, tartrate or oxalate, wherein R_{17} is hydrogen or unsubstituted or substituted C_1 - C_{18} alkyl or aryl.
51. (previously presented): A method according to claim 46, wherein n is an integer having a value of from 1 to 4.
52. (previously presented): A method according to claim 46, wherein m is an integer having a value of 1 or 2.
53. (previously presented): A method according to claim 46, wherein p is an integer having a value of from 0 to 4.
54. (previously presented): A method according to claim 46, wherein z is an integer having a value of from 8- to 8+.
55. (previously presented): A method according to claim 46, wherein aryl is phenyl or naphthyl unsubstituted or substituted by C_1 - C_4 alkyl, C_1 - C_4 alkoxy, halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino, N-mono- or N,N-di- C_1 - C_4 alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino, N-naphthylamino, phenyl, phenoxy or by naphthoxy.
56. (previously presented): A method according to claim 46, wherein the 5-, 6- or 7-membered ring formed by R_{14} and R_{15} together with the nitrogen atom bonding them is an unsubstituted or C_1 - C_4 alkyl-substituted pyrrolidine, piperidine, piperazine, morpholine or azepane ring, wherein the nitrogen atoms can optionally be quaternized.
57. (currently amended): A method according to claim 46, wherein R_6 is C_1 - C_{12} alkyl; phenyl unsubstituted or substituted by C_1 - C_4 alkyl, C_1 - C_4 alkoxy, halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino, N-mono- or N,N-di- C_1 - C_4 alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino, N-naphthylamino, phenyl, phenoxy or naphthoxy; cyano; halogen; nitro; $-COOR_{12}$ or $-SO_3R_{12}$ ~~wherein R_{12} is in each case hydrogen, a cation, C_1 - C_{12} alkyl, or phenyl unsubstituted or substituted as indicated above;~~ $-SR_{13}$, $-SO_2R_{13}$ or $-OR_{13}$ ~~wherein R_{13} is in each case hydrogen, C_1 - C_{12} alkyl, or phenyl~~

~~unsubstituted or substituted as indicated above~~; $-\text{NR}_{14}\text{R}_{15}$; $-(\text{C}_1\text{-C}_6\text{alkylene})\text{-NR}_{14}\text{R}_{15}$; $-\text{N}^{\oplus}\text{R}_{14}\text{R}_{15}\text{R}_{16}$; $-(\text{C}_1\text{-C}_6\text{alkylene})\text{-N}^{\oplus}\text{R}_{14}\text{R}_{15}\text{R}_{16}$; $-\text{N}(\text{R}_{13})\text{-(C}_1\text{-C}_6\text{alkylene})\text{-NR}_{14}\text{R}_{15}$; $-\text{N}(\text{R}_{13})\text{-(C}_1\text{-C}_6\text{alkylene})\text{-N}^{\oplus}\text{R}_{14}\text{R}_{15}\text{R}_{16}$; $-\text{N}(\text{R}_{13})\text{-N-R}_{14}\text{R}_{15}$ or $-\text{N}(\text{R}_{13})\text{-N}^{\oplus}\text{R}_{14}\text{R}_{15}\text{R}_{16}$, wherein

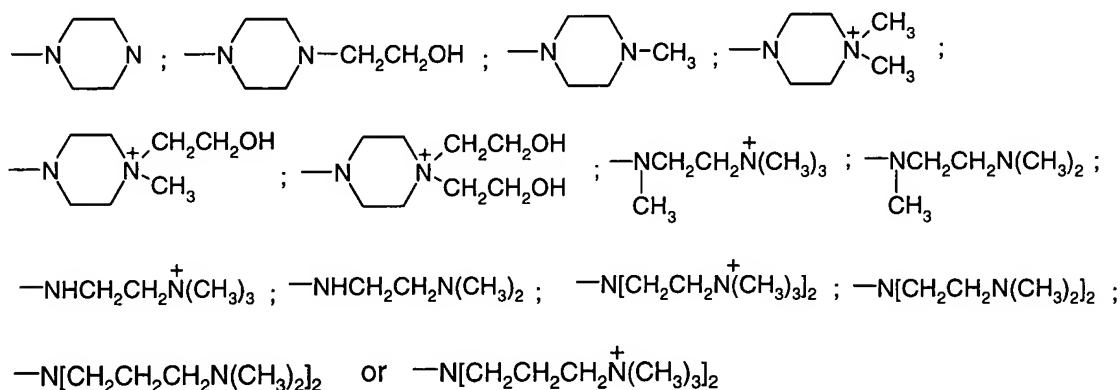
R_{12} is in each case hydrogen, a cation, $\text{C}_1\text{-C}_{12}$ alkyl, or phenyl unsubstituted or substituted as indicated above;

R_{13} is in each case hydrogen, $\text{C}_1\text{-C}_{12}$ alkyl, or phenyl unsubstituted or substituted as indicated above;

~~wherein R_{13} can have one of the above meanings~~ and R_{14} , R_{15} and R_{16} are each independently of the other(s) hydrogen, unsubstituted or hydroxyl-substituted $\text{C}_1\text{-C}_{12}$ alkyl, or phenyl unsubstituted or substituted as indicated above, or R_{14} and R_{15} together with the nitrogen atom bonding them form a pyrrolidine, piperidine, piperazine, morpholine or azepane ring which is unsubstituted or substituted by at least one unsubstituted $\text{C}_1\text{-C}_4$ alkyl and/or substituted $\text{C}_1\text{-C}_4$ alkyl, wherein the nitrogen atom can be quaternized, and

R_1 , R_2 , R_3 , R_4 , R_5 , R_7 , R_8 , R_9 , R_{10} and R_{11} are as defined in claim 46 or are hydrogen.

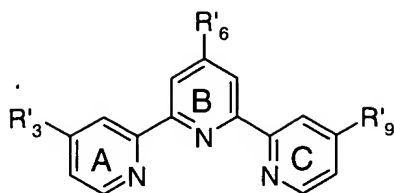
58. (previously presented): A method according to claim 57, wherein R_6 is



and

R_1 , R_2 , R_3 , R_4 , R_5 , R_7 , R_8 , R_9 , R_{10} and R_{11} are as defined above or are hydrogen.

59. (previously presented): A method according to claim 57, wherein the ligand L is a compound of formula



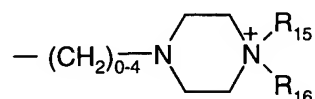
(3)

wherein

R'_3 , R'_6 and R'_9 are as defined for R_6 in claim 57, wherein R'_3 and R'_9 can additionally be hydrogen.

60. (previously presented): A method according to claim 59, wherein

R'_3 , R'_6 and R'_9 are each independently of the others phenyl unsubstituted or substituted by C_1 - C_4 alkyl, C_1 - C_4 alkoxy, halogen, phenyl or hydroxyl; cyano; nitro; $-COOR_{12}$ or $-SO_2R_{12}$, wherein R_{12} is in each case hydrogen, a cation, C_1 - C_4 alkyl or phenyl; $-SR_{13}$, $-SO_2R_{13}$ or $-OR_{13}$ wherein R_{13} is in each case hydrogen, C_1 - C_4 alkyl or phenyl, $-N(CH_3)-NH_2$ or $-NH-NH_2$; amino; N-mono- or N,N-di- C_1 - C_4 alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, wherein the nitrogen atoms which are not bonded to one of the three pyridine rings A, B or C, may be quaternized; N-mono- or N,N-di- C_1 - C_4 alkyl- $N^+R_{14}R_{15}R_{16}$, unsubstituted or substituted by hydroxy in the alkyl moiety, wherein R_{14} , R_{15} and R_{16} are each independently of the others hydrogen, unsubstituted or hydroxyl-substituted C_1 - C_{12} alkyl, or phenyl unsubstituted or substituted as indicated above, or R_{14} and R_{15} together with the nitrogen atom bonding them form a pyrrolidine, piperidine, morpholine or azepane ring unsubstituted or substituted by at least one C_1 - C_4 alkyl or by at least one unsubstituted C_1 - C_4 alkyl and/or substituted C_1 - C_4 alkyl wherein the nitrogen atom can be quaternized; N-mono- or N,N-di- C_1 - C_4 alkyl- $NR_{14}R_{15}$ unsubstituted or substituted by hydroxy in the alkyl moiety, wherein R_{14} and R_{15} can have the meanings indicated above; or a radical



wherein R_{15} and R_{16} have the meanings indicated above, and the ring may be substituted, where R'_3 and R'_9 can likewise be hydrogen.

61. (previously presented): A method according to claim 59, wherein R_6 is hydroxy.

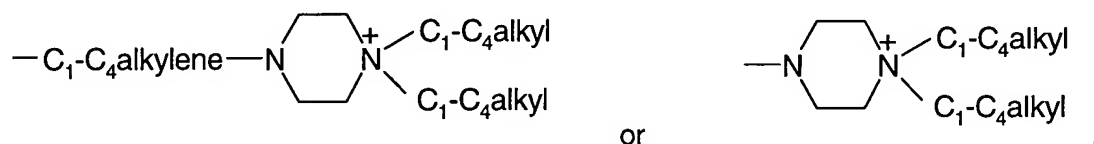
62. (previously presented): A method according to claim 46, wherein at least one of the substituents R_1 - R_{11} is one of the radicals $-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N[(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}]_2$; or $-N(R_{13})-N^{\oplus}R_{14}R_{15}R_{16}$, wherein R_{13} is in each case hydrogen, C_1 - C_4 alkyl or phenyl and R_{14} , R_{15} and R_{16} are each independently of the others hydrogen or substituted or unsubstituted C_1 - C_{18} alkyl or aryl, or R_{14} and R_{15} together with the nitrogen atom bonding them form a substituted or unsubstituted 5-, 6- or 7-membered ring which may contain further heteroatoms; or $-NR_{14}R_{15}$; $-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$; $-N[(C_1-C_6\text{alkylene})-NR_{14}R_{15}]_2$; or $-N(R_{13})-N-R_{14}R_{15}$, wherein R_{13} and R_{16} are as defined above and R_{14} and R_{15} together with the nitrogen atom bonding them form a 5-, 6- or 7-membered ring which is unsubstituted or substituted by at least one unsubstituted C_1 - C_4 alkyl and/or substituted C_1 - C_4 alkyl and may contain further heteroatoms, wherein at least one nitrogen atom which is not bonded to one of the pyridine rings A, B or C is quaternized.

63. (previously presented): A method according to claim 59, wherein at least one of the substituents R'_3 , R'_6 and R'_9 is one of the radicals $-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N[(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}]_2$; or $-N(R_{13})-N^{\oplus}R_{14}R_{15}R_{16}$, wherein R_{13} is in each case hydrogen, C_1 - C_4 alkyl or phenyl and R_{14} , R_{15} and R_{16} are each independently of the others hydrogen or substituted or unsubstituted C_1 - C_{18} alkyl or aryl, or R_{14} and R_{15} together with the nitrogen atom bonding them form a substituted or unsubstituted 5-, 6- or 7-membered ring which may contain further heteroatoms; or $-NR_{14}R_{15}$; $-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$; $-N[(C_1-C_6\text{alkylene})-NR_{14}R_{15}]_2$; or $-N(R_{13})-N-R_{14}R_{15}$, wherein R_{13} and R_{16} are as defined above and R_{14} and R_{15} together with the nitrogen atom bonding them form a 5-, 6- or 7-membered ring which is unsubstituted or substituted by at least one unsubstituted C_1 - C_4 alkyl and/or substituted C_1 - C_4 alkyl and may contain further heteroatoms, wherein at least one nitrogen atom which is not bonded to one of the pyridine rings A, B or C is quaternized.

64. (previously presented): A method according to claim 46, wherein at least one of the substituents R_1 - R_{11} is one of the radicals $-(C_1-C_4\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$;

$-N[(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}]_2$; or $-N(R_{13})-N^{\oplus}R_{14}R_{15}R_{16}$, wherein R_{13} is as defined in claim 46 and R_{14} , R_{15} and R_{16} are each independently of the others hydrogen or substituted or unsubstituted C_1-C_{12} alkyl or aryl, or R_{14} and R_{15} together with the nitrogen atom bonding them form a 5-, 6- or 7-membered ring which may be unsubstituted or substituted by at least one unsubstituted C_1-C_4 alkyl and/or substituted C_1-C_4 alkyl and may contain further heteroatoms; or $-NR_{14}R_{15}$; $-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$;
 $-N[(C_1-C_6\text{alkylene})-NR_{14}R_{15}]_2$; or $-N(R_{13})-N-R_{14}R_{15}$, wherein R_{13} and R_{16} are as defined above and R_{14} and R_{15} together with the nitrogen atom bonding them form a substituted or unsubstituted 5-, 6- or 7-membered ring which may contain further heteroatoms, wherein the nitrogen atom which is not bonded to one of the pyridine rings A, B or C is quaternized.

65. (previously presented): A method according to claim 64, wherein at least one of the substituents R_1-R_{11} is one of the radicals



wherein the alkylene group is unbranched or branched and may be substituted, and wherein the alkyl groups are independently unbranched or branched and may be substituted and wherein the piperazine ring may be substituted.

66. (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1) is used in a washing, cleaning, disinfecting or bleaching agent.
67. (previously presented): A method according to claim 66, wherein a metal complex compound of formula (1) is formed *in situ* in the washing, cleaning, disinfecting or bleaching agent.
68. (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1) is used together with a peroxy compound for the bleaching of spots or stains on textile material or for the prevention of the redeposition of migrating dyes in the context of a washing process or for the cleaning of hard surfaces.

69. (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1) is used as a catalyst for reactions with a peroxy compound for bleaching in the context of paper-making.
70. (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1) is used as a catalyst for wastewater treatment.
- 71 (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1) is used as a catalyst for the delignification of cellulose.
72. (previously presented): A method according to claim 46, wherein mixtures of manganese complexes of the formula (1) with iron complexes of the formula (1) are used for preventing the redeposition of migrating dyes and at the same time bleaching of spots or stains on textile material.
73. (currently amended): A method according to claim ~~46~~74, wherein mixtures of manganese complexes of the formula (1) with iron complexes of the formula (1'), which corresponds to the formula (1) but contains no quaternized nitrogen atoms, are used.